



Changing Contexts of Higher Education Policy: toward A New Role of Universities in Indonesia's Innovation System

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Abstract

With the collapse of the 32-year ruling centralistic regime in the middle of 1998, decentralization became a buzzword within the public policy discourse thereafter. In particular, the higher education sector has been restructured under the heading of 'university autonomy,' characterized by a shift from previously government's mission-driven, to a more economically driven steering mechanism based on contractual consent on objectives to be achieved. The work presented in the paper is situated within the above context of policy changes. Problem formulation of the research was guided by theoretical ideas that new/different mode of knowledge production is required if knowledge is to bring value to society.

The aims of the paper are twofold. In the first part, through empirical research, the paper examines: (i) how the faculty members respond to the above described policy changes, and (ii) how different social conditions, in which a university is embedded, define different constraints and opportunities for universities to develop new external linkages and collaborations. Secondly, base on the empirical findings, we discuss the relevance of the notion of triple-helix in the context of Indonesia's system of innovation.

Our main empirical findings are as follow. Firstly, the ways faculty members respond to the policy changes seem to depend on a set of social elements, e.g. values, norms, practices, goals established in a network of relations, in which they are engaged. Secondly, reflecting upon the empirical findings, we see a good place for triple-helix model to be adopted within the context of Indonesia's innovation system. Our findings show a way in which institutional blending may occur, that is through cultural embeddedness.

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1. Introduction

Indonesia's policy reforms that gained momentum in late 1998 have generated a new context for universities to define their new role in society. With the collapse of the 32-year ruling centralistic regime (i.e. the New-Order Regime) in the middle of 1998, decentralization became a buzzword within the public policy discourse thereafter. In particular, the higher education sector has been restructured under the heading of 'university autonomy,' characterized by a shift from previously government's mission-driven, top-down steering mechanism, to a more economically driven steering mechanism based on contractual consent on objectives to be achieved. A presidential decree was then introduced in 1999, serving as a regulatory basis for both, university autonomy and commercialization of university research. A number of government-owned universities were selected to take a lead in organizational transformation, as a realization of the concept of autonomous university. The key structural element in the newly formed autonomous university is the board of trustees, being conceptualized as a representation of market actors and civil society elements in the university governance. And in 2004, a fiscal instrument was introduced via a presidential decree, aimed at stimulating the participation of private industries in university research commercialization. The work presented in the paper is situated within the above context of policy changes. We believe that such a transitional phase provides space and opportunity to find new ways for universities to expand their role in the Indonesia's innovation system.

Problem formulation of the research was guided by theoretical ideas that new/different mode of knowledge production is required if knowledge is to bring value to society. In particular, we refer to ideas developed within the innovation literature that emphasizes the crucial role of interactions, linking knowledge producers with its users (Etzkowitz, 2002); and science and technology studies (STS) literature, the notion of epistemic culture or system is introduced to study how the process of knowledge generation and warranty is shaped, and at the same time defines, social structure (Knorr-Cetina, 2004).

The aims of the paper are twofold. In the first part, through empirical research, the paper examines: (i) how the faculty members respond to the above described policy changes, and (ii) how different social conditions, in which a university is embedded, define different constraints and opportunities for universities to develop new external linkages and collaborations. Secondly, base on the empirical findings, we discuss the relevance of the notion of triple-helix as formulated by (Etzkowitz, 1998; Etzkowitz & Leydesdorff, 2000), in the context of Indonesia's system of innovation.

2. Methodology

A qualitative, case study approach was made use to conduct empirical research. The notion of actor-network, as advocated in the actor-network theory literature (e.g. Latour, 1979), was employed to gain deeper insights into how scientists (i.e. faculty members) co-produce social linkages and knowledge. Thus, the data used in our research consist of policy documents, university administrative reports, scientific papers, statements in newspaper articles, and transcripts resulting from in-depth interviews with actors from the relevant ministries, university administrators, faculty members, and other relevant stakeholders. Two types of universities were

selected to conduct the case study, by considering the contrast between their social conditions: an autonomous university; and a long-established private university. The interviews were conducted between 2006-2008, two or three times for each respondent. During the interviews, the respondents were let free to shape the course of the discussion and take up any issues they regarded as important from their particular perspectives. The documents were coded according to the topics emerging from the interviews. The texts of transcripts were linked to that of the coded documents by taking note of segments that were in one way or another related to the issues addressed in the documents.

3. Research Findings

What follows is a description of the conception of autonomous university that results from interviews with government officials the Ministry of Education and Parliament members

Controversy in Policy Conception

Until today, the legislation process for university autonomy has not come to a final end. The first draft of the university autonomy legislation was made in 2004 by Commission X of Parliament, and since then, several revisions have been made. The existing legal basis is presidential decree, made in 1999 as a transitory legal framework. We see that at least two factors influence the delay in the legislation process: firstly, different views among members of Commission X, Parliament; and secondly, the public and faculty members' responses to the initiatives undertaken by major universities.

Formally, the legislation process of the university autonomy involves officials of the ministry of national education and Commission X of the Parliament. Our interviews with those officials reveal some issues under pro-longed debates.

A former official of directorate general of the national education ministry describes what he considers as essential objective of giving autonomy to universities,

“Higher education services are non-profit activities that require a large amount of investment. Thus, we need to find legal ways in which universities may draw funding sources from the society, and manage their financial resources. In the future, performance of universities should be qualified not only with reference to the number of graduates, but, more importantly, with reference to the extent the graduates penetrate into the labor market. Higher education services should be more relevant to labor market demand.”

He also told us that in the conception process, some officials of the ministry of national education have conducted benchmark study in the UK. He describes some of key observations,

“Higher education policy reform in UK has shown good results. Many universities have developed close relationship with industries, and many universities researches have been useful to their industry partners. And this brings returns to the universities as capitals.”

The former Chair of Commission X of the Parliament describes the key mechanism of government support to universities,

“The government will provide funding to autonomous universities based on the output they produce. The outputs are graduates with certain quality”

However, another member of Commission X of the Parliament puts emphasis at different points,

“The most important principle is that the legislator framework for university autonomy assures that the state fulfills responsibility to provide education services to each individual civilian. The legislation should aim at protecting the rights of young generation for education, and providing education with primary quality.”

Yet another member of Commission X, made a similar note, saying that, “Our constitution assures that the state holds responsibility for education.”

Thus, though the interviewees agree that higher education policy reform aims at quality improvement, they differ with respect to the ways that quality is defined, and the role of the government. While one party seems to adhere to market mechanism, to other party emphasis the responsibility of the state. Controversy of similar tone also occurs within other sectors (such as energy, water, and infrastructure). There emerge critics among policy observers and politicians that government liberalize important public sectors without fully aware of long-term impacts of such policies.

The introduction of the university autonomy policy invites wide criticism from academicians, but from different perspectives. A senior academician that took part in formulating the policy told us that the concerns of universities are autonomy in academic matters, less bureaucracy, and in the use of financial resources for academic development. However, as the conception goes, it shifts from the original objectives and concerns. Another critics looks at value shifts, worrying that academicians would spend more time looking for money, and forgetting their responsibility as teachers and researchers.

Academicians' Responses

While the legislation process is yet to find its final form, the university executives and faculty members face the challenge to find appropriate model/models of autonomous university. Six government-owned universities are undertaking initiative in conducting ‘experiment’ with new models. The rest, both government-owned and private-owned universities, are in the preparatory stage. When the legislation for autonomous university is established, then it will be applicable to all universities.

ITB Case

ITB was founded in 1959 as the first national institute of science and technology education. Since the beginning, ITB is national in its orientation, although its name, ‘Bandung’, refers to the capitol of West Java. Its faculty members and students come from across regions and ethnics of Indonesia. Until 1999, the status of ITB, also other government-owned universities, is government apparatus. In 2000, ITB becomes an autonomous university. The key features, formally, of autonomous university, as compared to the conventional government-owned university, is described in Table 1.

Table 1. Key Features of Autonomous University.

	Government-owned University	Autonomous University
Status	Government-owned; an apparatus of the government bureaucracy (belong to the ministry of national education)	A legal body, separated from the government bureaucracy; subject to government regulations and state constitution
Public role	No mechanism for public participation in university governance	Public participation through representatives in the board of trustees (MWA); subject to financial audit by government approved auditor
Sources of funding	All costs related to teaching activities are provided by the government	Only partial cost are covered, as subsidies, by the government, under certain performance indicators; universities are allowed to raise fund from other sources

The first institutional changes are the establishment of the Board of Trustees (*Majelis Wali Amanah*, MWA), as a key part of university governance, and the introduction of new mechanism for rector election. Members of the Board of Trustees represent faculty members, non-academic staff, the central government and other social elements of the society. In 2000, the first rector election was conducted in ITB. Five candidates, all are ITB faculty members, succeeded to the latest stage of the election. Describing the strategy proposed in the campaign, the elected rector told us,

“ITB, in its entirety, will be divided into two functional organs, one organ works to produce *academic excellence*, the other one works as a *money engine*. Autonomous ITB is not a commercial organization. The opinion that being autonomous equals being commercial is incorrect. Autonomous ITB does develop commercial units. But we should not forget that *academic excellence* is our foremost principle.”

The MWA at that period was chaired by a senior scientist that is widely known (within ITB faculty members) by his ideas of techno-park and techno-entrepreneurship. He introduced those ideas to ITB in early 1970s, and since that time he established several private companies. He describes his view on autonomous ITB as,

“ITB will have to develop techno park. ITB holds share up to 20 %, and the rest is to be owned by new entrepreneurs. Thus, Autonomous ITB implies that ITB has the right to manage its own money, no longer under the control of HE ministry.”

Organizational changes were then introduced by the newly elected rector, under the approval of MWA, such as the re-organization of research centers, the integration of the Research Institute and Community Service Institute (both are administrative apparatus), and the establishment of business incubation centers. Efficiency was then becoming an important performance measure to ITB’s executives, and each research center was asked to enhance commercial values of their

outputs. The role was that research centers that fail to improve their performance will be closed, or be merged into other center that succeeds.

However, critics and resistance were emerging from within the faculty members, and especially from academic senates. One of the major critics is whether business and academic activities can go side-by-side within an academic institution. One of researcher told us,

“The executives demand that we pursue profit and become a profit center. Such an orientation is not accepted in our traditional norm.”

Another researcher, a more senior scientist, made a stronger assertion,

“ITB is an education institution. It is not the place for business. Only teaching and research can take place. Commercial activities will only lead to depreciation of knowledge, and ultimately ignorance.”

A senior scientist (a physicist), which was a member of the Academic Senate told us, “The difference between business and science is this. In science you may get wrong results, and in this is okay, but you should never lie. In business, you can’t make wrong decision, but it is okay if you lie.” What he refers with this statement was the wide-growing commercially oriented activities within ITB. He made a note on potentially conflicting values that were brought about by those activities.

Potential conflict of interests, emerging from the introduction of commercial activities into universities, is addressed in Etzkowitz (2003), when he discusses the notion of entrepreneurial university. He goes further by conceptualizing ways in which such a conflict could be resolved, that is, by separating academic and business activities, or by integrating research and business activities under a broader institutional mission (p. 117). In the case of ITB, the executives chose the second way. The ITB’s rector, in many occasions, delivered speech emphasizing the need to integrate the two organs of ITB (i.e. the commercial and the academic organs), as this will lead to ITB contribution to the Indonesia’s economy. However, the success of their attempt seems to be limited. While negative perceptions on commercial activities could be neutralized by broadening the mission of those activities, such as that of contribution to national economy, another issue seems harder to translate. Interviews with scientists work actively in research centers show that they hold basic research in high esteem, as the following comment by a senior scientist from engineering sciences center exemplifies,

“If the value is translated on money, there is no place for *basic research*. The funding that scientists get from basic research project is much less then that you get from industrial problem-solving projects.”

Surely, basic research projects, in the conventional meaning of the word ‘basic’ as ‘purified,’ are costly. And their outputs are hardly relevant to any social contexts. This, however, does not mean that basic research is actually context-free. Many ITB’s scientists that work on basic research projects are actually engaged with other scientists elsewhere (mostly overseas), and they define their research problems within those particular ‘social-contexts.’ The work by Knorr-Cetina (2004) is worth noting here, since it shows clearly how basic/fundamental researches are generated within a variety of cultures (i.e. the notion of ‘epistemic culture’). Of course, for scientists to shift their research orientation, say, from basic to applied or commercially relevant research, this could imply that they need to withdraw from their previous contexts, and to build new contexts. This would be costly effort.

The resistance continues, and the responses by faculty members remain diverse. Early in 2005, executive election was conducted in ITB. The elected rector was the former head of the Academic Senate. The former rector was appointed as the ministry of research and technology by the newly elected President of Indonesia. While the former rector defines his role as chief executive official, the new (present) rector assert that his role as 'academic rector.' One of his policies is to make a clear boundary separating business and academic activities. For example, the new rector refuses to use the name Business Incubation Centers, and introduces a new name, that is Business and Industry Incubation Centers. He told us that,

"The conception of business incubation is misled. People think that if business works, then our problem is solved. The question is, where the products come from? If they come from foreign industries, what is the significance of the business? We have to develop our own industries using our own technologies. The correct business is that that generate from our own industries."

UKSW Case

What follows are findings from interviews with academicians from the Satya Wacana Christian University (*Universitas Kristen Satya Wacana*, UKSW). We decided to take UKSW as a case of our research, based on findings of our secondary data review. We find that UKSW shows a unique characteristic as compared to other major private universities, that is, they show intensive research activities with close interaction with local communities. Most of private universities in Indonesia focus their activities on teaching. UKSW was established by a Christian based foundation in 1959. The foundation itself was supported by 18 church representatives from a variety of regions across Indonesia. One of the UKSW missions puts emphasis on formation of minority groups as creative agents for the nation's development.

Responding to the autonomous university policy introduced by the central government, one of the UKSW executives told us,

"From the very beginning we have been an autonomous university. We never ask support from the central government. We strive to define our identity and independence. And we seek funding support from a variety of sources."

Nevertheless, organizational changes are made in UKSW such as integration of research and community service units. Regarding the organizational change, the chair of the newly formed research and community service institute (LPPM) told us, "The change is administrative. However, this is not a serious issue since we have already developed good management practices." The UKSW has adopted a policy that gives flexibility to individuals or groups to develop their activities, especially to close collaborations with local communities, local government and businesses, as long as they conform with the university missions. In most cases, projects are initiated by individuals or groups, and the executives facilitate the establishment of collaborations, and provide institutional support whenever necessary.

Research activities that are relevant to community development are highly appreciated by the university executives. Faculty members that are involved in such activities are freed from teaching obligation. The university has introduced policy that encourages students to conduct final year projects or theses with topics related to community development problems in the eastern part of Indonesia. One of such topic is indigenous knowledge. Findings from various field researches are discussed periodically, to allow for knowledge exchanges among researchers

and students, and ultimately to produce new knowledge. In this way, research activities that have strong practical orientation generate substantial knowledge development. Thus, UKSW seems to be ready to adopt the government policy on autonomous university. To them, the reduction of government support is not a serious issue.

A senior researcher describes the way they design their research programs,

“Our work is not on project-to-project basis, work that ends with the accomplishment of the project targets. We have to be critical with respect to theories. We have to understand our own reality. We want to understand the poverties in our society, the nature of our nationality. We do not want to rely on what grand theories tell us. Of course, we do not have to produce new grand theories. At least, we seek to contribute by producing new knowledge. I believe Indonesia’s scientists are capable of doing that.”

Regarding the forms of research collaborations, the head of the center on gender studies describe,

“We develop a research methodology that allows for lay-people participation. That is, we position people that we study as a subject that participates actively in our research. They are not mere objects.”

While producing new knowledge and critical research are considered highly important, commercial activities are not seen as deviants. A senior researcher describes to us,

“Academic freedom is guaranteed in this university, as long as we conform to the university missions. For example, we do not do business activities inside campus. But it is considered legitimate to establish outside campus a foundation, or a company that runs profit-generating activities. What binds us here is our share mission. “

Many of research projects developed by UKSW research centers have a strong development orientation, and of multidisciplinary in nature. Head of a research center describes those projects,

“We collaborate closely with local government to design regional development planning. We offer to the government our own approach in planning, and generate our own data to study poverty. We are not satisfied with data generated by the Bureau of Census. We look not only at technical and infrastructural aspects, but also cultural and political. Scientists from a variety of disciplines were involved such as agriculture, biology, economics, and civil engineering. We also identify local entrepreneurs and help to develop business plans. We study the use of IT for improving bureaucracy efficiency. All the designs were developed by involving local partners, and most of them were implemented and remain in operation until today.”

A Wider Picture

Different government-owned universities are responding to the new higher education policy in different ways. The notion of research universities seem to be widely discussed. The Brawijaya University (located in Malang, East Java) chooses the exercise with the idea of entrepreneurial university. We do not have information what they mean by this, how they conceptualize this idea and adopt is in practices. An executive of Brawijaya University describes briefly that they push faculty members to make close interactions with local businesses, local communities and government. In the last five years, collaborations with local SMEs have shown commercially valuable results. Undergraduate students have been encouraged to produce final

year projects that are relevant to local SME needs. Other government-owned universities choose to establish new undergraduate and diploma programs. Such an approach has created tension with private universities.

4. Discussions

Lessons we draw from empirical findings are as follow. Firstly, the ways faculty members respond to the policy changes seem to depend on a set of social elements, e.g. values, norms, practices, goals established in a network of relations, in which they are engaged. For instant, those faculty members engaged in a close relation with international research partners (usually in basic research or frontier technology development) see the new policy as restricting their academic freedom. To them, the notion of autonomous university as brought about via the policy change is in conflict with their view of academic values, and serves as a potential danger to the genuine university autonomy. However, to those faculty members already engaged in more heterogeneous partners, such as local communities or enterprises, the new policy is conceived as in line with their goal and expectation. Such a case is particularly shown by UKSW faculty members.

Thus, what the faculty members consider as ‘prestigious’ researches also vary according to networks of relations in which they are engaged. Scientists that found acceptance of their research in local communities or enterprises, sees the new policy as encouragement for more extensive collaborations, and intensive involvement in local innovations. On the other hand, scientists that have limited engagement with local communities/enterprises, and work mostly for publishing prestigious work, see the demand for relevance as leading to degradation in the quality of academic research.

At the university management level, we found that the autonomous university under study was involved in a series of negotiations with the government ministries regarding the objectives of autonomous university. While, to the government ministry, market relevance is a key element of the university’s output quality, the university’s management proposes ‘research university’ as the main attribute of autonomous universities, undermining the issue of market relevance. To the private university under study, being a university founded by an ideology-oriented foundation and being less dependent on government, the new policy is conceived as opening opportunities to gain financial and regulatory support from the government.

In most cases, faculty members see interaction with major private industrial less beneficial. Most of them are, in fact, multinational corporations that have their own research and development divisions located overseas, leaving little room for collaboration with domestic scientists. As for the national private industries, the lack of domestic competition during the New-Order Regime had caused weakness in technological capabilities (Hill & Thee, 1998), creating limited opportunity for university-industry collaborations. Collaborations with private enterprises do exist, and in some cases lead to technological innovation. However, such collaborations seem to be based on a social mission and goal, mutually shared by the faculty members and social organizations, to which the enterprises are affiliated. Thus, social organizations, particularly those having cultural roots, play an important role in facilitating collaboration among local enterprises and universities.

Reflecting upon the empirical findings, we see a good place for triple-helix model to be adopted within the context of Indonesia's innovation system. In particular, our empirical findings support the principle underlying the triple-helix model, formulated by Etzkowitz (1998), Etzkowitz & Leydesdorff (2000) that asserts the importance of interaction, external linkages and collaboration for universities to play a knowledge intensifying role in an innovation system. The principle implies that blending of institutions at different social spheres as a key institutional process for knowledge production, circulation, structuring, warrant and use.

Our results show a way in which institutional blending may occur, that is through cultural embeddedness (see also relevant discussions by Timothy, 1997). For a developing society like Indonesia, in which traditional and modern cultures stands side-by-side, often in a complex mixes, cultural nexus seems to be as important as institutional mechanism, in supporting the development of innovation system.

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